Existing BT PPS (toroidal field programmable power supply) has expanded MST capabilities.

New BP PPS (poloidal field programmable power supply), in prototype stage, will allow full use of MST capabilities. Innovative design will save money, allow higher currents, and reduce diagnostic noise.

**BP PPS: improved design**

- 32 modules for +/- 1800 V, 25 kA
- BT PPS: 32 modules in series
- BP PPS: 36 modules in series
- BP PPS modules isolated, reconfigurable
- BP PPS Pulse Width modulation: 7-level
- BP PPS module isolation allows parallel balanced-coasting

**Conclusions**

BT PPS has given MST new capabilities

BP PPS is needed to fully exploit MST capabilities

BP PPS will use improved design to reduce cost, reduce noise

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